English translation of the amended sheets of International Preliminary Examination Report

CLAIMS

1. Assembly comprising a clamping device (1) and a fiber (2) held by said device (1) and comprising a rigid and brittle core (24) surrounded by a mechanically deformable cladding (22), said fiber (2) possibly being subjected to at least one mechanical stress, said clamping device (1) comprising several jaws (4) distributed around a main axis (6) of this device (1) and occupying a clamped position, each jaw (4) comprising an inner surface (14, 114) composed of a central portion (16, 116) and two end portions (18, 20, 118, 120), said end portions (18, 20, 118, 120) being made so as to prolong the central portion (16, 116) by gradually moving away from the main axis (6) of said device (1), characterized in that a section of the inner surfaces (14, 114) on any plane perpendicular to the main axis (6) of the device (1) is a closed line, and in that only part of each end portion (18, 20, 118, 120) is in contact with the mechanically deformable cladding (22) of the fiber (2).

2. Assembly according to claim 1, characterized in that for each jaw (4), the end portions (118, 120) are surfaces for which a section defined by any plane passing through the main axis (6) of the device (1) is a line segment.

3. Assembly according to claim 1, characterized in that for each jaw (4), the end portions (18, 20) are surfaces for which a section defined by any plane

passing through the main axis (6) of the device (1) is a curved line.

4. Assembly according to any one of the above claims, characterized in that the inner surface (14, 114) of each jaw (4) is a surface with no sharp angle.

5. Assembly according to any one of the above claims, characterized in that for each jaw (4), the inner surface (14) is a surface for which a section defined by any plane perpendicular to the main axis (6) of the device (1) is an arc of circle with a radius greater than the nominal outside radius of the mechanically deformable cladding (22).

6. Assembly according to any one of claims 1 to 4, characterized in that the inner surface (114) of each jaw (4) is a surface for which a section defined by any plane perpendicular to the main axis (6) of the device (1) is a line segment.

7. Assembly according to any one of the above claims, characterized in that the jaws (4) of said device (1) are metallic jaws.

8. Assembly according to any one of the above claims, characterized in that each jaw (4) also comprises an outer surface (10) in the form of a conical portion, each outer surface (8) cooperating with a complementary conical inner surface (12) provided on a jaw support (8) of said device (1).

9. Assembly according to any one of the above claims, characterized in that the fiber is an optical fiber.

10. Assembly according to any one of the above claims, characterized in that it can be used in a strain gage and/or in a Bragg grating optical fiber sensor.